AMENDMENT TO THE CLAIMS

Claims 2, 4-5, 7-11 and 13-16 are original.
Claims 1 and 12 are currently amended.
Claims 3 and 6 were previously presented.

Listing of Claims:

1. (Currently Amended) A method for recrystallizing a semiconductor thin film to improve its crystalline quality, comprising:

(a) irradiating a first region of a surface of the semiconductor thin film with a pulse of a radiation beam, wherein the radiation beam is first patterned into at least one beamlet in a pattern of beamlets, wherein each beamlet is incident on a target area in the first region, wherein each beamlet has sufficient fluence to melt semiconductor material in the target area on which it is incident, and wherein the molten semiconductor material in the target area recrystallizes when it is no longer exposed to the incident beamlet; and

(b) continuously translating the semiconductor thin film relative to the radiation beam so that a second region of the surface of the semiconductor thin film is irradiated in the same manner as in (a), wherein the second region ~~is geometrically~~ corresponds to a second area which is separate from a first area corresponding to the first region.

2. (Original) The method of claim 1, wherein the beamlets have cross sectional dimensions of the order of a micron.

3. (Previously Presented) The method of claim 1 further comprising using a mask to pattern the beamlets from the radiation beam pulse.

4. (Original) The method of claim 3, wherein the mask comprises:

a blocking portion that blocks through passage of radiation incident on it;

a plurality of slits in a pattern, wherein the slits allow through passage of radiation incident on them, and wherein the slits are disposed substantially parallel to each other in the pattern.

5. (Original) The method of claim 3, wherein the mask comprises:

a blocking portion that blocks through passage of radiation incident on it;

a plurality of slits in a pattern, wherein the slits allow through passage of radiation incident on them, and wherein the slits are arranged in pairs along the sides of rectangles in the pattern.

6. (Previously Presented) The method of claim 1, further comprising supporting the semiconductor thin film on a movable stage, and wherein translating the semiconductor thin film relative to the radiation beam comprises moving the movable stage along a linear path to the next region.

7. (Original) The method of claim 6, wherein the semiconductor thin film comprises rows of regions, further comprising moving the movable stage along the linear path through a first row of regions on the surface of the semiconductor thin film.

8. (Original) The method of claim 7 wherein the movable stage is moved continuously without pause through the row of regions.

9. (Original) The method of claim 7 wherein the movable stage is paused at a region and is then stepped to an adjacent region.

10. (Original) The method of claim 7 further comprising moving the movable stage along linear paths through successive rows of regions until the entire surface of the semiconductor thin film has been processed.

11. (Original) The method of claim 1 wherein at least one of the target areas in the first region is contiguous to a corresponding target area in the next region, so that after irradiation of the first and next regions an extended strip or recrystallized semiconductor material is formed.

12. (Currently Amended) A method for recrystallizing a semiconductor thin film to improve its crystalline quality, comprising:

(a) using a laser to generate a pulse of a radiation beam;

(b) irradiating a first region of a surface of the semiconductor thin film with the pulse of the radiation beam, wherein the radiation beam is first patterned into at least one beamlet in a pattern of beamlets, wherein each beamlet is incident on a target area in the first region, wherein each beamlet has sufficient fluence to melt semiconductor material in the target area on which it is incident, and wherein the molten semiconductor material in the target area recrystallizes when it is no longer exposed to the incident beamlet; and

(c) after irradiating the first region of the surface of the semiconductor thin film with the pulse of the radiation beam, translating the semiconductor thin film relative to the radiation beam so that a second region of the surface of the semiconductor thin film is irradiated in the manner of in (a) and (b), wherein the second region ~~is geometrically~~ corresponds to a second area which is separate from a first area corresponding to the first region.

13. (Original) The method of claim 12, wherein the laser is triggered to generate the pulse of the radiation beam according to the position of the thin film semiconductor region relative to the radiation beam.

14. (Original) The method of claim 12, further comprising supporting the semiconductor thin film on a movable stage, and wherein translating the semiconductor thin film relative to the radiation beam comprises moving the movable stage, and wherein the laser is triggered to generate the pulse of the radiation beam according to the position of the movable stage.

15. (Original) The method of claim 14, wherein the position of the movable stage is sensed by position sensors.

16. (Original) The method of claim 14, wherein the position of the movable stage is computed from an initial position of the stage.